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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/750,549 | 12/28/2000 | Seung Kil Kim | 4015-2039 | 6961 |

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COATS & BENNETT, PLLC
P O BOX 5
RALEIGH, NC 27602

EXAMINER

LEE, SEUNG H

ART UNIT PAPER NUMBER

2876

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,549

Applicant(s)

KIM, SEUNG KIL

Examiner

Seung H Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-28 is/are allowed.
- 6) ☒ Claim(s) 1-4, 14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 5-13, 15-16 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The specification is objected to because of the following informalities:

Page 4, line 7: Substitute "fr4om" with --from--.

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

Re claim1, line 5: Delete "its".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 14, 17, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 4, line 1: "**approximately**" is indefinite and vague in its relationship to the millimeter (i.e. what does it mean by reciting "approximately 2mm"?),

Re claim 14, line 1: "**approximately**" is indefinite and vague in its relationship to the frequency (i.e. what does it mean by reciting "approximately 100 kHz"?),

Re claim 17, line 1: "**approximately**" is indefinite and vague in its relationship to the frequency (i.e. what does it mean by reciting "approximately 100 kHz"?),

Re claim 20, line 1: The phrase "said improvement" lacks proper antecedent basis.

Appropriate clarification and correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 3, 4, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jannersten (EP 1,040,854) in view of Seo et al. (US 5,697,699)(hereinafter referred to as 'Seo').

Jannersten teaches a scanner or barcode reader comprising a plurality of sensors or light sensitive detectors (3-10) in which detectors are arranged in a side-by-side in order to detect/sense a designated portion of the barcode on the card (see Fig. 1; col. 2, line 44- col. 4, line 30).

However, Jannersten fails to particularly teach or fairly suggest that the bar code reader comprising a plurality of light sources.

Seo teaches a data reader having an array of light sources (45 and 46) wherein each light source has a plurality of light sources (41) such as LED (see Fig. 2; col. 5, lines 8-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Seo to the teachings of Jannersten in order to provide an improved and an enhanced system means for detecting each and every bar code on the surface using a designated light sources for specified position of the barcode accordingly. Moreover, such modification would provide a maintenance friendly system since operator(s) only need to pinpoint/identify the malfunctioning part of detectors/sources then replacing necessary parts for reading of the barcode correctly. Furthermore, such modification (i.e., using LED as a light sources) is well known in the art at the time the invention was made failing to provide unexpected results.

Although, Jannersten as modified by Seo fails to particularly teach or fairly suggest that three sources and three sensors are spaced 2mm from each other, it would have been an obvious engineering variation well within the ordinary skill in the art failing to provide any unexpected results for choosing any given numbers of sources and sensors wherein the sources and sensors are distanced 2mm between each and every sensors therebetween to read barcode accordingly, and therefore an obvious expedient.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jannersten as modified by Seo applied to claim 1 above, and further in view of Williams (US 4,578,571).

The teachings of Jannersten/Seo have been discussed above.

Although Jannersten/Seo teaches the code reader having a plurality of light sources/sensors, they fail to teach or fairly suggest that code reader comprise a circuitry for modulating light sources at a high frequency.

However, Williams teaches a bat code scanner comprising a signature oscillator (40) to produce a high frequency signal in which contains a bar code baseband wherein the baseband signal can be extracted (see Fig. 3; col. 7, lines 15-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Williams to the teachings of Jannersten/Seo in order to improve a readability of the scanner by modulating the light source at a high frequency wherein the high frequency signal is free from interference, and therefore an obvious expedient.

Allowable Subject Matter

8. Claims 5-13, 15-16, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 22-28 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

Although, the best prior art of record to Jannersten and Seo teach the bar code reader having a plurality of sensors and corresponding a plurality of light sources for reading the assigned barcode portion of the code thereof. However, Jannersten and Seo taken alone or in combination of other references, fail to specifically teach or fairly suggest that the barcode is read by each of the plurality of light sensors in series and performing a bit wise comparison of the each of the plurality of light sensors in order to correct for read errors via a bit wise majority voting scheme as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure;

Daboub et al. [US 4,092,525] and Katana et al. [US 4,743,773] disclose a bar code reader,

Peters [US 4,401,892] discloses a label reader system,

Ramsden, Jr. [US 3,926,292] and Pezaris [US 4,639,874] disclose a system having a plurality of light sources and a plurality of detectors.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Seung H. Lee whose telephone number is (703) 308-5894. The examiner can normally be reached on Monday to Friday from 7:30 AM to 4:00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (703) 305-3503. The fax-phone number for this group is (703) 308-5841 or (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.lee@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Seung H. Lee
Art Unit 2876
December 26, 2002



KARL D. FRECH
PRIMARY EXAMINER